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**CENTRAL INTELLIGENCE AGENCY
Office of Current Intelligence
23 September 1963**

CURRENT INTELLIGENCE MEMORANDUM

SUBJECT: Statements Concerning Casualties Resulting from General Nuclear War

1. Statements by officials of the United States and Soviet governments on the subject of casualties resulting from nuclear exchange tend to be grand in scope and scanty in detail, reflecting the difficulties of answering a complex and essentially theoretical question. Meaningful comparisons between statements by US and Soviet officials are therefore difficult to make. The following summary of statements is intended to be selective rather than exhaustive. An attempt has been made to eliminate general pronouncements on the catastrophic nature of nuclear war as well as those statements of a purely polemical or propaganda purpose. Classified US statements are not included.

2. Open source Soviet statements on nuclear warfare generally are heavily propagandistic and avoid the use of details. In those instances where specific figures are used, official US reports are often cited as the sources:

"According to data submitted to the Senate by American experts, losses after 24 hours of nuclear war are expected to total 50 to 75 million people."

Premier Khrushchev, 6 January 1961;
Report on Moscow Conference.

"According to the US Health Service, in the event of a nuclear blow on cities in America,

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whose population totals 188 million, the number of killed alone would amount to 53 million."

Marshal Malinovskiy, 23 October 1961;
XXII Party Congress.

3. Exceptions to this general lack of detail in open source Soviet statements have been noted on occasion in semiofficial Soviet publications. An April 1962 article by Major General Talenskiy in International Life, for example, noted that a 50-megaton hydrogen bomb could destroy any capital in the world, would kill up to 12 million people, cause total destruction over an area of 1,930 square miles, considerable damage within 49.7 miles of the point of impact, and contaminate a surrounding area of 7,867 square miles with lethal radiation.

4. One recent statement by Premier Khrushchev did cite specific casualty figures, however, and is comparable to a similar recent statement by a high-level US official:

"According to the calculations of scientists the very first blow would destroy between 700 and 800 million people. All large towns, not only in the United States and the Soviet Union--the two leading nuclear powers--but also in France, Britain, Germany, Italy, China, Japan, and many other countries would be razed to the ground and destroyed. The consequences of atomic and H-bomb war would be effective during the lives of many generations and would result in disease, death, and would cripple the human race."

Premier Khrushchev, 16 January 1963;
Sixth SED Congress.

"A full-scale nuclear exchange, lasting less than 60 minutes, could wipe out more than 300 million Americans, Europeans, and Russians, as well as untold numbers elsewhere. And the

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survivors, as Chairman Khrushchev warned the Communist Chinese, 'would envy the dead.' For they would inherit a world so devastated by explosions and poisons and fire that today we cannot conceive of all its horrors."

President Kennedy, 26 July 1963; Address to the Nation.

5. In no case, however, do Soviet leaders admit to an inferiority to the West:

"The American politicians more and more persistently reiterate over and over again to their people that in a thermonuclear war the United States will suffer smaller losses than the Soviet Union and will be able to gain the upper hand. This is a fatuous illusion. The imposition of such an interpretation of a question aims at preparing the public opinion of America and its allies for the unleashing of a war."

Premier Khrushchev, 10 July 1962; Moscow Disarmament Conference.

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ANNEX I

Soviet Statements on Casualties Resulting from Nuclear Warfare:

1. "In the days of the (Cuban) crisis the American people felt the scorching breath of thermonuclear war on the threshold of their home, and began to understand that if a world war was unleashed it would take its course not somewhere over the ocean in Europe or Asia but everywhere, including American territory, and bring grief and death to millions of Americans."

Premier Khrushchev; 12 December 1962
Speech to the Supreme Soviet

2. "In the estimate of authoritative atomic scientists in the West, the potential of nuclear death in the present world is 250,000 megatons, or 250 billion tons of TNT. Thus, on an average over 80 tons of explosives are already in store for every inhabitant of our globe, and the population of the globe is plentifully supplied with this commodity.

"It assumes a universal nature and will bring destruction and death upon millions of people in every part of the world. What does it mean in terms of mankind? One of the outstanding fighters against atomic death, the prominent American scientist Linus Pauling, in his book "There Must Be No More Wars," estimates the number of possible human victims in a nuclear war at about 800 million.

"In such a war only a few thermonuclear bombs can completely destroy not only major industrial centers with multimillion populations but whole states. American experts have calculated that one hydrogen bomb of 20 megatons, exploded in the air, would raze all brick and steel houses within a radius of up to 24 kilometers from the epicenter of the explosion. The firestorm would burn everything flammable, all living creatures, in an area extending from New York to Philadelphia. Now bombs of 50, 100, and even more megatons have been created.

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According to approximate calculations of scientists, the world's atomic weapons stocks are already equal in yield to 12.5 million bombs of the type dropped on Hiroshima."

Premier Khrushchev; 10 July 1962
Moscow Disarmament Congress (World
Peace Council)

3. "According to scientific calculations, the explosion of a single hydrogen bomb in an industrial area can destroy up to 1.5 million people, and cause death from radiation to another 400,000.

"Even a medium-sized hydrogen bomb is sufficient to wipe a large town off the face of the earth. British scientists have concluded that four megaton bombs, one each for London, Birmingham, Lancashire, and Yorkshire would destroy at least 20 million people.

"Pauling, a well-known American scientist, states: The areas likely to suffer strong nuclear blows are inhabited by about 1 billion people. In 60 days from the moment of atomic attack, 500 to 750 million people could perish. Nuclear war would also bring innumerable hardships to the peoples of those countries not directly subjected to bombing; in particular, many millions would perish as a result of the lethal consequences of radiation."

Premier Khrushchev; 6 January 1961
Report on Moscow Conference

4. "In the event of another world war, all countries would ultimately suffer in one way or another. We too, would suffer great calamities; we would have many losses, yet we would survive. Our territory is immense and the population is less concentrated in major industrial centers than in many other countries. The West would suffer incomparably more."

Premier Khrushchev; 14 January 1960
Speech to the Supreme Soviet

5. "This year at a session of the UN General Assembly we proposed universal and total disarmament. We are ready to sink all our rockets. Incidentally, let me tell you and let people abroad know this, I

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am not hiding it--that in one year a plant that we visited produced 250 rockets with hydrogen warheads on the assembly line. This is many millions of tons in terms of ordinary explosives. You can imagine that if such deadly weapons were dropped on any country, nothing at all would be left there. This is the sort of powerful weapons we have to defend our homeland...."

Premier Khrushchev; 14 November 1959
Moscow, Meeting With Soviet Journalists

6. "Permit me to remind you now of certain data. An official document of the US Congress states that '263 thermonuclear strikes with an average TNT equivalent of some 5 million tons each may be dealt against the most important targets in the US in the initial stage of war.' According to the American calculations, 132 large military targets, many and important industrial enterprises of various types, and 71 large cities would be destroyed by these strikes. The total area of radioactive contamination would cover almost one half the country's territory. As a result of all this, one half the population would be subject to destruction by nuclear weapons.... Moreover, a number of calculations similar to those given above, but pertaining to other countries, are cited. For example, they calculate that no more than eight nuclear warheads, each equivalent to 5 million tons (of TNT), are necessary to put West Germany out of operation...."

Marshal Malinovskiy; 23 October 1961
XXII Party Congress

7. "If for purposes of clarification and analysis we turn to the calculations of both our own and foreign specialists, it appears that approximately 100 of these nuclear charges exploded in a brief period of time over a state with developed industry whose area comprises about 300,000-500,000 square kilometers would be enough to turn all its industrial areas and centers of political administration into a heap of ruins and the territory into a lifeless desert contaminated with deadly radioactive substances. Moreover, states of small area and high population density are extremely vulnerable, while states with extensive territory, on the other hand, have less vulnerability and greater capacity to survive.

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"We have taken all this into account, and having at our disposal powerful modern means of fire in the form of rockets with nuclear warheads, we find it completely practical to undertake a substantial reduction in the numerical strength of the Soviet Armed Forces without harm to our defense capability...."

Marshal Malinovskiy; 14 January
1960
Speech to the Supreme Soviet

8. "A 10-megaton bomb, of which there are already large numbers in the thermonuclear arsenal, can cause total destruction in an area with a radius of 12-15 kilometers and considerable damage, including the burning of all combustible materials, within a radius of 30-50 kilometers. This bomb can permanently blind a person looking toward the explosion at a distance of up to 150 kilometers. It can cause the death, by radioactive fallout, of all (exposed) persons within an area over 300 kilometers long and about 40 kilometers wide, depending on the direction of the wind, within 48 hours following the blast. According to average calculations, the explosion of a thermonuclear rocket or bomb dropped on urban or industrial centers can cause the death of from 2 to 8 million people, not counting those who would subsequently die from (exposure to) radiation. Such casualties would range from 25 to 40 percent of the total number killed in the blast.

"But a 10-megaton rocket or bomb has not been the limit for a long time. Fifty-megaton rocket warheads or bombs--these too are now available in the arsenal of rocket and nuclear means of combat--can cause 50 to 100 percent more fatalities and destruction than the 10-megaton bomb. A 100-megaton thermonuclear bomb can inflict still greater fatalities and destruction. It can cause second-degree burns over a distance of more than 100 kilometers; cause injury (with 50 percent of the fatalities occurring within the first 4 days) by radioactive fallout within a range of more than 1,000 kilometers from the epicenter of the explosion; and injure the retina, to the extent of complete loss of vision, over an additional 1,000 kilometers."

Major-General Talenskiy; October
1963
International Life

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ANNEX II

U.S. Statements on Casualties Resulting from Nuclear Warfare:*

1. "In general, the results of a series of studies on the effects of nuclear war show that between 40 and 120 million Americans would survive the blast and heat effects of a large scale nuclear attack which might be possible in the years ahead, but would be killed by the fallout radiation which would blanket large sections of the country--unless they had access to a shielded place to take cover from the radiation."

Steuart L. Pittman; 19 July 1962
Civil Defense Council Meeting,
Seattle

2. "Although the Soviets could in a nuclear exchange cause the gravest damage to the United States and its population, they do not possess at this time either the first or second strike capability to destroy the U.S."

Arthur M. Dean; 30 May 1962
Geneva Disarmament Conference

3. "A 20-megaton ground burst on downtown Boston would seriously damage reinforced-concrete buildings to a distance of 10

*In view of the number of U.S. public statements quoted by Soviet officials and reported under Annex I, only a few statements have been selected for inclusion in this Annex. Many of these statements, as well as those U.S. and Soviet statements included in Annex I, have been used in numerous subsequent statements on the subject by other government officials.

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miles, roughly to circumferential Route 128, and demolish all other structures.

"Within a circle of a radius of 16 to 21 miles second-degree burns would be produced and clothing, houses, foliage, gasoline and so forth would ignite, producing a fire storm. Human survival in this area would be practically impossible, and an estimated 2,250,000 deaths would occur in metropolitan Boston from blast and heat alone."

"The Medical Consequences of Thermonuclear War," New England Journal of Medicine; 31 May 1962 (as submitted to the House Armed Services Committee, June 1963)

4. "A five-megaton nuclear burst at ground level would destroy most buildings two miles from the point of the explosion. Steel-frame buildings would be knocked sideways and great fires started.

"The destruction five miles away would be less severe, but fires and early fallout could be a significant hazard.

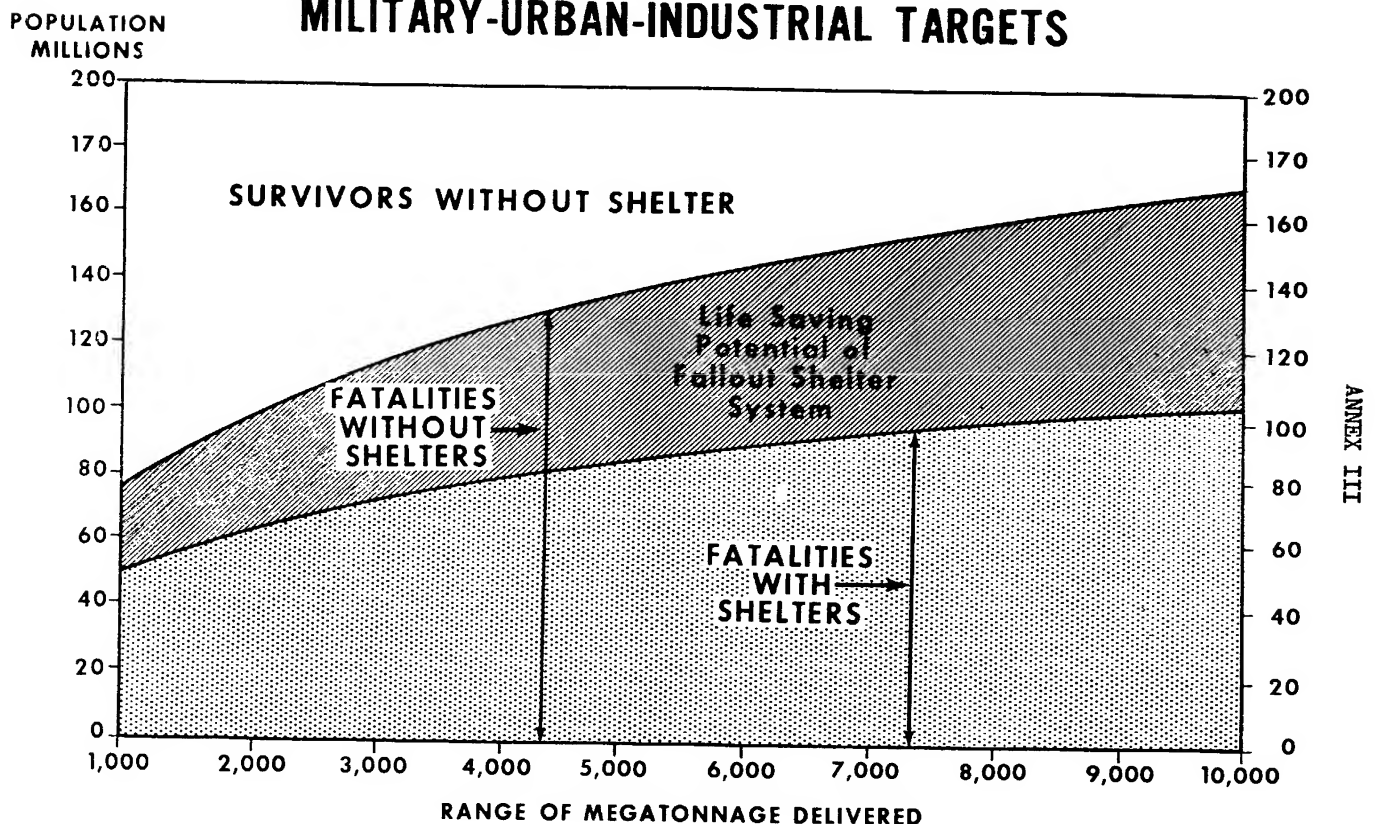
"At 10 miles, sturdy buildings would remain intact. At this distance fires probably would not be started by the fireball, but might be started by the blast wave which could rupture gas lines and short-circuit wires. Flying glass would present a major danger, as would early fallout.

"At 50 miles from the bomb burst, all buildings would remain standing. The fading blast wave would take about five minutes to arrive, but would still shatter many windows. The greatest danger at this distance would be from early fallout which would begin arriving in some areas within three or four hours, depending upon weather conditions at the time."

Fallout Protection;
Civil Defense Pamphlet
December 1961

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LIFE SAVING POTENTIAL OF FALLOUT SHELTER SYSTEM IN ATTACKS AGAINST MILITARY-URBAN-INDUSTRIAL TARGETS



In event of attacks against military targets alone, total fatalities would be reduced and life saving potential of shelters would be increased.

SOURCE: Composite of damage assessment studies by Department of Defense

(from Highlights of the US Civil Defense Program as submitted to the President's Committee July '63)